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REVISTA ONLINE DE PESQUISA

CUIDADO É FUNDAMENTAL

Universidade Federal do Estado do Rio de Janeiro • Escola de Enfermagem Alfredo Pinto

INTEGRATIVE REVIEW OF THE LITERATURE DOI: 10.9789/2175-5361.2016.v8i4.5163-5176

Análise dos acidentes de trabalho na equipe de enfermagem: uma revisão integrativa

Analysis of the accidents at work in the nursing staff: an integrative review

Análisis de los accidentes de trabajo en el equipo de enfermería: una revisión integrativa

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How to quote this article:
Silva PLN; Carvalho LM; Mendonça JMG, et al. Analysis of the accidents at work in the nursing staff: an integrative review. Rev Fund Care Online. 2016 out/dez; 8(4):5163-5176. DOI: http://dx.doi.org/10.9789/2175-5361.2016.v8i4.5163-5176

ABSTRACT

Objective: To analyze work-related injuries in nursing staff. **Method:** Integrative review in which the sample was obtained by articles of national and international journals that were available on the SciELO and LILACS databases, between 2007-2011. **Results:** We found 212 publications, of which 18 were selected after applying the inclusion criteria. A large number of publications were found in SciELO (61%) and there was equality in the number of publications in the years 2007-2009 and 2011 (22.2%). After examination, it was noticed that the nursing staff is very struck by accidents, and that the sharps are the main villains in this sense, and biological material is also very present. **Conclusion:** It is concluded that not only the workers should have care knowledge in their workplace, but also the health institutions have to meet their obligations in order to protect the workers.

Descriptors: work accidents, nursing crew, occupational risks.

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RESUMO

Objetivo: Analisar os acidentes de trabalho na equipe de enfermagem. **Métodos**: Revisão integrativa na qual a amostra de artigos captados estava disponível em periódicos nacionais e internacionais e se encontravam nas bases do SCIELO e LILACS, durante os anos de 2007-2011. **Resultados**: Encontrou-se 212 publicações, sendo que 18 foram selecionados após aplicação dos critérios de inclusão. Encontrou-se um maior número de publicações na SCIELO (61%) e houve igualdade no número de publicações nos anos de 2007-2009 e 2011 (22,2%). Após a análise, percebeu-se que a equipe de enfermagem é bastante atingida pelos acidentes de trabalho, e que os materiais perfurocortantes são os principais vilões nesse sentido, e o material biológico se faz bastante presente. **Conclusão**: Conclui-se que não somente os trabalhadores devem ter a ciência dos cuidados em seu local de trabalho, mas também as instituições de saúde em cumprir suas obrigações visando à proteção do trabalhador.

Descritores: Acidentes de trabalho, Equipe de enfermagem, Riscos ocupacionais.

RESUMEN

Objetivo: Analizar las lesiones relacionadas con el trabajo del personal de enfermería. **Método:** Revisión integradora en la que se obtuvo la muestra de artículos disponibles en revistas nacionales e internacionales en las bases SciELO y LILACS, durante los años 2007-2011. **Resultados:** Se encontraron 212 publicaciones, de las cuales 18 fueron seleccionadas después de aplicar los criterios de inclusión. Se reunió un gran número de publicaciones en SciELO (61%) y hubo igualdad en el número de publicaciones en los años 2007-2009 y 2011 (22,2%). Después del examen, se observó que el personal de enfermería es muy atingido por los accidentes, y que los objetos punzantes son los principales villanos en este sentido, el material biológico está muy presente. **Conclusión:** Se concluye que no sólo los trabajadores deben tener la ciencia del cuidado en su lugar de trabajo, sino también las instituciones de salud para cumplir con sus obligaciones con el fin de proteger al trabajador.

Descriptores: Accidentes de Trabajo; Equipo de Enfermería; Riegos Ocupacionales.

INTRODUCTION

For some theorists of the twentieth century and early twenty-first century, the work has a great value in all the writings of the philosopher Karl Marx, being the life-affirming activity that forms the existence of individuals and establishes them as social characters. It is the work that expresses human superiority against other living beings. It would be the realization of man himself, the source of all wealth and material goods.[1] Work in health is essential for human life. It is understood work as a transforming action, and health specific to the identity of nature between subjects receiving care and caregivers, in addition to the inseparability of the production process and the product of labor.[2] When performing any type of work, people are exposed to occupational hazards and possible work accidents (AT).

Occupational hazards are defined as: Health risks or the worker's life due to their occupational activities.[3] Concern about the AT is old. There are reports of its existence since the time before Christ, Greek and Roman empires, in which diseases at work already occurred with slaves and servants. In Brazil, this concern is more recent, being translated by the law promulgated on 15 January 1919. The issue of AT nursing gained greater concern from the 1980s.[4]

AT is a sudden event that occurs in the course of labor activity, which causes damage to health, potential or immediate, and causes injury or functional disorder, which can cause death or permanent loss or temporary reduced ability to work. This includes even the accident in any situation where the employee is representing the interests of the company or acting in defense of its assets, in addition to occurring during the journey between the workplace and the home or otherwise.[5]

The Regulatory Standard (NR) 32, the Ministry of Labor and Employment (MTE) of 11 November 2005, created by Ordinance Nº 485, establishing measures to protect the health and safety of health workers in any health service. This standard calls for hand hygiene, vaccination of professionals for hepatitis B (HB), tetanus and diphtheria. Determine also some situations in regard to clothing and changing facilities, waste, continuous and ongoing training in the specific area of expertise, among other provisions. In addition to this standard, the MTE produced the Ordinance Nº 939 of 18 November 2008, which led employers to promote the replacement of sharps by other safety devices within 24 months from the date of publication of this Regulation. In 2011, the MTE repealing Ordinance Nº 939 with then Ordinance Nº 1748 of 30 August 2011, the employer shall devise and program plan Accident Risk Prevention with sharps, and the companies that produce or market sharps shall make available to the workers of health services, training on proper use of the safety device.[6]

In the last two decades, occupational accidents involving biological materials with the workers in the health sector have been gaining ground in the global survey, since exposure to pathogens that are linked to blood can lead professionals to contract infections, and the consequent harm to Cheers. As a historical example, one can refer to the first case occupational acquisition of *Human Immunodeficiency Virus* (HIV) occurred in England in 1984, after a nurse have been contaminated by a needle containing infected patient blood.[7] Nurses play a direct relief work and continued to the patient, making it susceptible to contamination by biological material, especially regarding accidents that occur by percutaneous inoculation mediated needles or sharp instruments, which are the most responsible for occupational transmission of blood-borne infections.[8]

This study aims to analyze the scientific publications on AT in the Nursing Team in national and international journals available in the Virtual Health Library (VHL), on the basis of the *Scientific Electronic Library Online* (SciELO) and the Latin American and Caribbean Health Sciences (LILACS), from 2007 to 2011.

Thus, the identification of studies related to AT can contribute to nursing professionals use measures in order to prevent/avoid these occupational accidents that occur in the workplace. These measures are also highlighted by other authors[9] suggesting the importance of programming more effective measures to diminish the AT and updates courses, educational programs, clinical follow-up of exposure, vaccination and use of safety devices to perform invasive procedures.

Theoretical framework

The OA can be classified as typical or path. Typical AT occurs during work performance; Path AT happens during displacement from the residence to the workplace. There is also the occupational disease, defined as the one which is produced or triggered by the exercise inherent to the profession and occupational disease that is acquired or triggered by special conditions where the work is performed and with which it relates. It is noteworthy also the duty that every AT must be registered with the competent social security body, using for this purpose the Communication of Work Accident (CAT).[10]

From the 1980s, the AT in the nursing team have been gaining ground in the global research.[7] Regarding legislation, the first way to protect the workers in relation to AT was through AT insurance institution in 1919.[11] From these constant and growing health concerns of the health worker, laws have emerged, ordinances NR to professionals be protected for accidents at work.

Historically, health professionals were not considered as a category that had high risk for AT. Concern about biological risks arose from the aggravation of finding health professionals working in the laboratory, which was handling both microorganisms as clinical material, and this since the 1940s.[12] Among the various types of accidents, the sharps are not only more frequent but also more serious, as they allow the development of life-threatening diseases for workers.[13] This is also highlighted in another study in which the accident sharps is a major accident occurs with the team of nursing. It was noted in the study that needlestick injuries are in the range of 79.87%; accidents with blood, organic material involved 86.58% and 59.06% lumen needles.[14]

In São Paulo, for example, of the accidents notifications with biological material in health professionals, 86% involved percutaneous exposure and 82% blood.[15] In relation to the most affected sites at the time of the accident, there are the hands, followed eyes, legs, trunk and other parts.[16]

Possible causes of these accidents with the nursing staff may be related to the unavailability/inappropriateness of personal protective equipment (PPE), work overload, lack of training on the correct use of biosecurity measures exist to be performed, as well as own. Feeling of invulnerability and wrong habit of recapping needles contaminated by some workers.[17] The main causes attributed to the occurrence of AT by these sharps are: disposal in inappropriate places or in overcrowded containers, transport or handling of unprotected needles and needle off the syringe, but the main associated factor is the recapping of needles.[18]

With the enactment of the Federal Constitution (FC) 1988, it was established the current Unified Health System (SUS), which separated the health of the pension plan, and this would be responsible for concessions and management of retirement and pension AT insurance. This role of Social Security appears in Section III, Article 201 of the Constitution of 1988.[19] On 19 setembro1990 was drafted Law Nº 8080, which provides for the conditions for the promotion, protection and recovery of health, the organization and operation of corresponding services and other measures. In its Article 5 establishes as SUS playing field executions of health surveillance, epidemiological surveillance, worker health. It also aims at the recovery and rehabilitation of health workers victims of risks and hazards from working conditions.[20]

Through Ordinance Nº 1679 of 19 September 2002, the National Network of Care for Occupational Health (RENAST).[21] Ordinance Nº GM was created. 2,437, of December 7, 2005, provides for the expansion and strengthening of RENAST and other measures, such as supporting the organization and structuring of average attendance and high complexity, local and regional, which meets the AT and injuries that are on the list of diseases and disorders related to constant work in GM Ordinance Nº 1339 of 18 November 1999, and also to the notifiable diseases contained in Ordinance Nº GM. 777 of 28 April 2004.[22-24]

On 11 November 2005, the MTE, through Ordinance Nº 485, creates the NR-32 aimed at establishing basic guidelines to plan measures to protect the safety and health of the health care workers and those who carry out promotion and health care activities in general. Calls, therefore, the use of PPE; hand hygiene; HB vaccination, tetanus and diphtheria. For this standard complement the purpose of establishing the Ordinance Nº 939 of 19 November 2008 establishing maximum period of 24 months from the date of publication of this ordinance, for companies to do the replacement of sharps by others with safety device. In 2011 the MTE repealing Ordinance Nº 939 with then Ordinance Nº 1748 of 30 August 2011, the employer shall devise and program plan Accident Risk Prevention with sharps, and the companies that produce or market sharps shall make available to the workers of health services, training on proper use of the safety device.[25-27]

According to law Nº 8213, 24 July 1991 all AT must be registered in the relevant social security instance, and must use the CAT for this purpose.[28] One way to avoid contamination by pathogens via the blood is to use EPI, forming protective barriers reducing contact with organic materials. The basic PPE are gloves, masks, gowns, cap and eye protection. Besides the use of such equipment, the care with immunization should be followed by the vaccine,

care for the environment. In addition, other approaches are essential for individual protection, as well as hand washing.[29] The basic objective of a precaution system is to prevent the transmission of a micro-organism from one patient to another, or to a health professional. This prevention encompasses measures concerning the transmission of the agents involved.[30]

METHODS

This is an integrative literature review which theme was AT the Nursing Team, presents itself also as a study of descriptive and exploratory.

The exploratory research aims to exhibit characteristics of a given population or particular phenomenon. In turn, can also establish correlations between variables and define its nature.[31] The descriptive research aims at the description of characteristics of a given population or phenomenon or to establish relationships between variables.[32] The integrative literature review consists of building an extensive literature review, contributing to discussions on methods and results of research, as well as reflections on the future studies. The initial objective of the study is to deeply understand a certain phenomenon based on previous studies.[33] The term "integrative" comes from the integration of opinions, concepts or ideas from the surveys used in the method.[34]

The literature integrative review is divided into six phases. In the first phase is to identify the theme or question the integrative review, which is prepared to issue the theme delimited search for integrative review, and then the keywords are determined for the studies search strategy. The second phase is the sampling or literature search, since the problem or theme is set, the search begins in the literature. The key element for the proper conduct is a comprehensive literature search. After finishing reading titles and abstracts, should be items selected. Aiming at a complete work, it is important that the studies are analyzed in full and that the search is as complete as possible. The third phase is the categorization of studies involving the preparation or use of a data collection tool that has been validated, which aims to extract the key information for each item that was selected. The fourth phase is the evaluation of the studies included in the integrative review. At this stage the items that were selected are reviewed in relation to the authenticity criteria, methodological quality, importance of information and representation.[35]

The fifth stage is to discuss the results at this stage after the interpretation and synthesis of the results, the data disclosed are compared in the analysis of articles to the theoretical framework.[36] The sixth phase, and final, is the presentation of the review/synthesis knowledge, it is said that the review should allow the replication of the study. In this last step should be drawn up a document that should include a description of all the stages covered by the researcher, judiciously, and should present the main results obtained.[34] This last step includes the data visualization. The display mode can be expressed in tables, graphs or charts, in which the comparison between all the selected studies is possible, and therefore, the identification of patterns, differences and subletting these topics as part of the general discussion.[36]

To survey the articles to be used, it was carried out a search in the Virtual Library database in Health (BVS), and initially without selection of titles or sources, and thus the articles that were selected for the study belonged to the database *Scientific Electronic Library online* (SCIELO) and the Latin American and Caribbean Health Sciences (LILACS). To carry out the research the following key words were used: "AT and Nursing Team" and "Occupational Risks and Nursing Team."

The study population was found in publications contained such data in the banks, and was selected the years from 2007 to 2011, being the most recent past years. A total of 212 articles were found, and of these, 103 were with the keywords "Occupational Risks and Nursing Team" and 109 with "AT and Nursing Team." They were first read all the titles and abstracts of articles. The following criteria for inclusion in the study were used: articles published between 2007-2011 that were in Portuguese, English and/or Spanish and articles that have the full text.

93 were related articles with both keywords and full text. Of these, 18 articles were selected for meeting all inclusion criteria, including the years referred to preparation of the final work, and found seven in LILACS database and eleven found in SCIELO. In the search it was found two articles in English, but we managed to open them in Portuguese; an article was in Spanish, Portuguese and English and the rest in Portuguese.

The search for articles was conducted in October 2012, to collect data. For data analysis it was constructed a table with eight items, which included: title, author(s), year, periodic, objective, methods, results and conclusion. When the data were collected, the articles were passed to the tables, which provided opportunity to analyze and relate these articles so that the display of which was published in the last five years related to TA in Nursing Team were visualized and understood the best possible.

A table in order to analyze all the selected items was built, these were transcribed and organized in that table. They also followed the steps of an integrative literature review: identification of theme or questioning of the integrative review; sampling or literature search; categorization of studies; evaluation of studies included in the integrative review; discussion of the results and final phase consists of presentation of the review/synthesis of knowledge.

RESULTS

This integrative literature review was made from articles selected by a previous survey conducted in the Virtual Health Library (VHL) without selection of titles or sources.

The articles chosen were indexed in the Scientific Electronic Library Online (SCIELO) and the Latin American and Caribbean Health Sciences (LILACS). The keywords chosen to carry out this research were: "AT/Nursing Team" and "Occupational Risk/Nursing Team." It was found 212 articles, and after applying the inclusion criteria: "full text", left over 93 articles, and finally selected a total of 18 articles for research. The articles are distributed in the table below.

Table 1 – Total distribution of articles with descriptors in the Virtual Library database in Health (BVS). Montes Claros, 2012

Data base	Keywords	articles found	articles selected
VHL	Occupational hazards; Nursing team.	103	02
	AT; Nursing team	109	16
Total		**212**	**18**

Source: Data collection. Integrative review 2012.

Table 2 – Total distribution of articles with descriptors in the LILACS and SciELO database. Montes Claros, 2012

Base accessed	n	%
SCIELO	11	61
LILACS	07	39
Language	n	%
Portuguese	15	83.5
English	02	11
Portuguese English Spanish	01	5.5
Total	**18**	**100**

Source: Data collection. Integrative review 2012.

Conducting the survey in the VHL was possible to highlight articles 18 to carry out this research, and of these, 39% were found at the base of LILACS and 61% in the SCIELO database. Of the sample, 83.5% were available in Portuguese and 11% in English, but we managed to open them in Portuguese, and 5.5% was available in three languages.

Table 3 – Transcribed articles according to the requirements chosen for evaluation. Montes Claros, 2012

Article	Title	Author	Year	Periodic	Goal	Methodology	Results	Conclusion
I	Accidents with biological material among public health workers units	Chiodi, Marziale, Robazzi[18]	2007	Rev Latino-am Enferm	To investigate the occurrence of AT with exposure to biological material among health workers, who work in Public Health Units.	Descriptive quantitative approach.	It was recorded via CAT, AT 155 in 2004, and 40% involved exposure to biological material susceptible to infection by Hepatitis and *Acquired Immunodeficiency Syndrome* (AIDS). Needles were responsible for 80.6% of the injuries and the blood was the material involved in most of the exhibits.	This subject needs greater attention so that preventive measures can be implemented, considering the peculiarities of the activities performed in the different professional categories.
II	Accidents with needlestick materials: knowing the feelings and emotions of nursing professionals	Lima, Pine, Vieira[8]	2007	Esc Anna Nery R Enferm	Identify the knowledge of the feelings and emotions of nursing professionals who had accidents with needlestick injuries in a hospital in the public schools.	This is a descriptive research with a qualitative approach.	It was found that the occurrence of AT Sharps may be favored by the realization of hard work carried out quickly, in more than one health facility, but also by inattention and distraction. Fear before the change of lifestyle was expressed by respondents after the accident.	Points to the in - service training, technical improvement and professional development developed by the continued education sector as important to minimize the risk AT.
III	Accidents at work in the nursing team of Paraná University Hospital - Brazil	Secco, Robazzi[16]	2007	Ciênc Enferm	Analyze the typical AT recorded by nursing staff according to the variables related to time, space and person and estimate risk indicators.	Descriptive epidemiological study of cross-sectional design.	The most affected were with AT Technical/Nursing Assistants. Accidents involving exposure to biological materials were the most common. And the hands were the hardest hit in the handling of sharps.	The findings showed that the typical AT presented to hegemonic every year. It emphasizes the importance of preventive measures through educational strategies and review of work processes to prevent accidents.

(To be continued...)

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Article	Title	Author	Year	Periodic	Goal	Methodology	Results	Conclusion
IV	Work accidents involving nursing workers	Ribeiro, Shimizu [4]	2007	Rev Bras Enferm	The aim of this study was to identify and analyze accidents and workloads they are exposed to the nursing staff in the development of their activities.	This is a case study, descriptive and exploratory.	It was found that the workers suffered 76 AT, among which, 83.95% were caused by sharps, 8.64% by falls, 6.17% by exposure to biological fluids and 1,24% by injuries.	To achieve adequate and safe working conditions, workers in nursing need to be technically skilled to perform functions and ultimately participate in the institutional development processes of labor policies affecting them.
V	Factors associated with needlestick injuries in the nursing team of a university tertiary referral hospital	Canini, Moraes, Gir, Freitas [7]	2008	Rev Latino-am Enferm	To identify factors associated with needlestick injuries in the nursing team of a tertiary hospital.	This is a case-control with a quantitative approach. Used multivariate logistic regression.	Six predictors of percutaneous injuries: "recapping needles"; "Workweek ≥ 50 hours"; "Nursing experience ≤ 5 years"; "Working on night journey"; "Self-assess how low the risk of accidents" and "previous needlestick injuries."	It is recommended that institutions directed to tertiary care, despite the limits imposed by conventional measures of promotion and prevention in health, take into account the implementation of effective and reasonable measures to prevent needlestick injuries informed knowledge management and its predictors.
VI	Occupational health: analyzing the risks related to the nursing team in an intensive care unit	Leitão, Fernande, Ramos [37]	2008	Ciênc Cuid Health	To analyze the occupational hazards they are exposed to the nurses working in the ICU.	Descriptive, exploratory study with a qualitative approach.	The main occupational hazards found were excess noise in the unit, inadequate temperature of the environment, failure to observe the control of gases and vapors, inadequate use of PPE during and radiation exposure. Recorded daily exposure to biological agents, psychosocial factors and ergonomic nature.	It is emphasized that there must be a concentration of efforts and resources to promote changes in the working environment, with the implementation of prevention programs and awareness of safe practices and the provision of continuous and uniform, the safety equipment on all the professionals.
VII	Biosecurity and work sharps injuries among university hospital nursing professionals in Fortaleza-CE	Paulino Lopes, Rolim [11]	2008	Cogitare Enferm	Characterize the AT occurred among health professionals; analyze the frequency with which it occurs AT sharps devices between reported nursing staff in Accident Notification Form and identify the factors contributing to its occurrence among nursing workers.	This is a documentary, exploratory study with a quantitative approach.	The object of the accident was visibly contaminated with blood or other organic substances in 61.5% of cases. In 28.2% of the accidents, the cause of the accident instrument had been used in the patient, but had no visible contamination. Syringe needles were the objects that caused more accidents, with 51.3% of the total. Then contains the peripheral access catheters (25.6%).	The education service is essential for the worker to see the importance of standard precautions, among which is included the prevention of sharps injuries and adoption of safe practices.
VIII	Experience report about the direction of conduct against Occupational accidents with sharps and body fluids	Sousa Campos [15]	2008	Cogitare Enferm	Report the lived experience of the orientation to the nursing staff about the conduct in case of accidents with sharps and body fluids.	This is a descriptive study, supported in a report of academic experience on the course for nursing staff about the conduct in case of accidents with sharps and body fluids.	The empirical observation of practice identified the significant manipulation of sharps and body fluids by the staged unit nursing professionals, exposing them constantly accident risks. The consequences of possible accidents damage the professional, patient and institution.	It is emphasized that it is for the nurse to seek information and develop actions aimed at education methodology in service, promoting the involvement of the nursing team.

(To be continued...)

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Article	Title	Author	Year	Periodic	Goal	Methodology	Results	Conclusion
IX	Repercussions of accident with needlestick for nursing: a construction from the focus group	Castro Farias [38]	2009	Esc Anna Nery R Enferm	Knowing the repercussions of the accident Sharps for nursing worker and discuss these repercussions.	Descriptive study with a qualitative approach.	Be surmised that the consequences of the accident have two facets: unfavorable impact on workers' health, involving feelings of fear, despair, worry, shame, anxiety and insecurity, and positive impact on the professional conduct of this work involving the need for further care and attention when handling sharps.	It was evident that this kind of accident affects the worker's subjectivity, the adoption of safety practices making it necessary to manipulate sharps in view of its high potential for health problems both in the physical and emotional nursing workers.
X	Accidents at work, occupational risks and absenteeism among hospital nursing staff.	Giomo, Freitas Alves, Robazzi [10]	2009	Rev Nurse UERJ	The objectives of this study were to identify AT, absenteeism and occupational risks relate with absenteeism related to two hospitals nursing workers in the city of Ribeirao Preto.	Descriptive study with a quantitative approach.	They identified 140 AT and of these, 85% for women, 81% among nursing assistants and 92% typical accidents. Among the route accidents happened, most occurred before the start of the work shift. All these accidents have generated 117 days of absence.	It is considered important to conduct further research to further study this issue so traumatic for the worker and for better planning of care and prevention of accidents.
XI	Occupational accidents involving biological material and the nursing staff of a teaching hospital	Gomes, Agy, Malaguti, Canini Cross Gir[9]	2009	Rev Nurse UERJ	To evaluate the occurrence of accidents with biological material among nursing professionals of a large teaching hospital, São Paulo.	Descriptive study, document, and quantitative approach.	Most accidents were percutaneous (85.7%) and 67.8% of exposures hollow needle was the most involved causing object. The most frequent occurrences were vascular punctures (26.8%) and drug administration (13.3%).	There is a need to program a permanent educational program and new strategies to enable the review of the work process.
XII	Occupational risks in a hemodialysis unit from the perspective of workers of the nursing staff	Silva, Zeitoune[39]	2009	Esc Anna Nery R Enferm	Describe the occupational risks in the context of workers of the nursing team in a hemodialysis unit, analyze the knowledge of the team about the protection and safety measures to the unit and discuss the knowledge of these workers on occupational hazards.	Descriptive exploratory study of qualitative approach.	Workers have the knowledge about occupational hazards and on the protection and safety measures, although not always apply them in their professional practice. They were cited as the main health implications respiratory problems, column and contagious diseases.	Despite the knowledge of the risks and safety and security measures, there is no practical application of these measures for the reduction of exposure to risk and even of occupational diseases. The aim is to review awareness strategies health care professional to risk prevention and occupational diseases.
XIII	Needlestick accidents among nursing professionals at a university hospital	Silva, Rock, Ayres, Juliani[14]	2010	Rev Gaucha Enferm	Analyze needlestick injuries in the period from 2002 to 2006, involving the nursing staff of a university hospital, to understand the context in which they occur. The use of this information can be a prevention tool.	Descriptive, retrospective study quantitative.	There were 149 accidents during the study period, with sharps, of which seven were recurrences involving the nursing staff in the categories: nurse, technician, auxiliary and nursing attendant.	The findings showed that there is still a significant degree of unawareness or trivialization of accidents among health professionals.

(To be continued...)

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Article	Title	Author	Year	Periodic	Goal	Methodology	Results	Conclusion
XIV	Work accidents involving sharps unit nursing professionals hospital emergency	Simon Smith, Souza, Borges, Cortez[12]	2010	Rev Nurse UERJ	The aim of this study was to identify and analyze the occurrence of AT with needlestick materials among the nursing staff.	Descriptive, exploratory study with a quantitative approach.	It was 44 (43.6%) professionals involved in this type of accident, and the hollow needle most often associated object (68.2%) and the needle recapping responsible for 38.6% of accidents.	The analysis of the results shows that a significant part of the hospital's emergency unit nursing framework has been AT victim involving sharps.
XV	Investigation of biological accidents among professionals of the multidisciplinary team of a hospital	Camera, Lyre, Junior, Vilella, Hinrichsen[40]	2011	Rev Nurse UERJ	Analyze the occurrence of accidents with biological material among professionals in a hospital general care.	Descriptive study documentary with a quantitative approach.	The most exposed professional category was nursing technicians (50%), followed by nurses (25.5%), and the leading cause of occurrence was due to improper disposal of sharps (43.6%).	No need to program a continuing education program, monitoring of procedures performed and implementation of biosecurity protocols.
XVI	Workloads and nursing working conditions: integrative review	Schmöller, Trinity, Neis, Gelbcke Saucer[2]	2011	Rev Gaucha Enferm	Knowing the theoretical production on workloads and working conditions of nurses.	This is a descriptive study, supported in an integrative review of scientific papers, theses and dissertations of the last ten years.	The results indicated workloads as responsible for the drain of professionals, influencing the occurrence of accidents and health problems.	Studies suggest some strategies, such as adequacy of staffing quantitative, continuing education and better working conditions.
XVII	Evaluation of occupational exposure to biological material in health services	Valim, Marziale[13]	2011	Text Context Enferm	Identify the occurrence and characteristics of AT with biological material in health institutions of a city in the interior of São Paulo.	Descriptive transversal study, document, and quantitative approach.	The disposal of sharps in inappropriate places accounted for 18.8% of the 85 AT; 80% had contact with blood, and 20% was used chemoprophylaxis.	There is need to improve the quality of records and research possible underreporting.
XVIII	Analysis of accidents with biological material among health workers	Vieira, Padilha, Pine Tree[17]	2011	Rev Latino-am Enferm	Knowing the AT with exposure to biological material and workers profile, from the reporting forms the Regional Reference Center for Health Florianopolis Macroregion worker.	Descriptive, retrospective documentary with a quantitative approach.	Predominated nursing technicians, female, mean age of 34.5 years. Accidents, 73% involved percutaneous exposure, 78% had contact with blood and / or fluid with blood and 44.91% resulted from invasive procedures.	The strategies to prevent the occurrence of AT with biological material should include joint actions between workers and management of services should be directed to the improvement of the conditions and organization of work.

Table 4 - Items distributed as the year of publication, type of methodology, journals found, study setting and subject matter. Montes Claros (MG) 2012

Year of Publication	**n**	**%**
2007	04	22,2
2008	04	22,2
2009	04	22,2
2010	02	11,1
2011	04	22,2
Type Method	**n**	**%**
documentary exploratory	01	5.5
Descriptive, retrospective, quantitative and qualitative	01	5.5
integrative review	01	5.5
if control	01	5.5
descriptive	01	5.5
descriptive exploratory	01	5.5
Descriptive and qualitative	04	22.5
Descriptive and quantitative	03	17
Descriptive, cross	02	11
Descriptive, exploratory and quantitative	01	5.5
Descriptive, retrospective and quantitative	01	5.5
Experience report	01	5.5
Journal	**n**	**%**
cogitare Nursing	02	11
Nursing Journal of Rio Grande do Sul	02	11
Anna Nery School Journal of Nursing	03	17
Latin American Journal of Nursing	03	17
Brazilian Journal of Nursing	01	5.5
UERJ Nursing Journal	04	22
Science and Nursing	01	5.5
Text & Context Nursing	01	5.5
Science, Care and Health	01	5.5
Study Scenario	**n**	**%**
Universitary hospital	06	33
Public hospital	05	28
General hospital	01	5.5
Hospital	02	11
Database	01	5.5
Health facilities	01	5.5
Public Health Unit	01	5.5
Worker's Health Reference Center	01	5.5
Subject Addressed	**n**	**%**
Types of AT	17	94.4
Causes of AT	16	88.8
Legislation	07	38.8
biosecurity	15	83.3

Source: Data collection. Integrative review 2012.
[1] Cumulative Percentage

After analyzing the articles chosen by the year of publication, it was noted that there was equality in the years 2007, 2008, 2009 and 2011 - four publications each year, which is equivalent to 22.2% each year, and that number fell in 2010, we were found two publications (11.1%). According to the methodology used to realize a larger share of exploratory descriptive with 22.5% of publications, followed by descriptive quantitative with 17%, and descriptive transversal character with 11% and the other followed a standard 5.5 %. It was realized that each article opts for different methodologies.

Regarding the journals found in the search, it is observed that the magazine received more publications on the subject was the Journal of Nursing of UERJ, with 22% of publications, followed by Anna Nery School and Latin American Journal of Nursing, 17 % each, Cogitare Nursing and Nursing Journal of Rio Grande do Sul with 11% each, and finally the other obtained a percentage of 5.5% of publications. The University Hospitals were those who had a higher number of searches performed, with a total of 33% of the articles, followed by Public Hospitals were second with regard to conducting research, the hospital has averaged 11% followed by other study scenarios with 5.5%.

In the selected articles it was revealed that, in response to the question of the study, "What has been published about AT in nursing team in the last five years?", In 94.4% was approaching "types of TA" in 88.8% possible "causes of these accidents," 38.8% in the "law" with regard to worker safety, the rights and duties of the same, and 83.3% addressed to "biosafety".

DISCUSSION

In this study, it was found 212 articles on the topic searched. Of these, only 18 fulfilled the inclusion criteria of the search. The surveyed items are in the languages English, Portuguese and Spanish. And of these, one was in Portuguese, English and Spanish, two were in English, but it was possible to open them in Portuguese, and the others were exclusively in Portuguese. There was an equal number of publications in the years 2007-2009 and 2011, each with a total of 22.2% of the publications and in 2010 this figure fell to 11.1%. Regarding the methodology most used by the authors of the selected studies highlight the descriptive exploratory with 22.5%, followed by descriptive quantitative with 17%, and descriptive transversal character with 11% and the other followed a pattern of 5.5%. But also realize is that each article opts for different methodologies.

As for the journals that had a higher number of publications are was the UERJ Nursing Journal, with 22% of publications, followed by Latin American Journal of Nursing and School Anna Nery, each with a total of 17% of publications. The study scenario that prevailed more in the research were the University Hospitals that reached a total of 33% of all selected publications, followed by public hospitals with 28%. These were the two leading scenarios. The subjects that had more relevance in pre-selected articles were related

to the types of TA (94.4%); the possible causes of these accidents (88.8%); the legislation governing the protection of workers, as well as guidance on their duties (38.8%); and biosafety (83.3%).

In the articles analyzed stands out an average of 385,000 accidents per year involving sharps to health workers. An investigation by the Center for Disease Control and Prevention (CDC) has identified 57 cases of seroconversion and other 140 possible cases of occupational post exposure AIDS in the period 1981 and 2006. It was also noted that, percutaneous accident appeared in 48 cases and skin mucus were five cases.[13] In this review, the other selected items not found absolute number of number of accidents, but are specific percentages of the types of accidents.

Sharps injuries are the ones that occur in health institutions.[9] Other research supports in order to report large number of accidents with sharps, and with hollow needle registers 68.2%, with scalp/Gelco 22.7% and finally the scalpel blade 4.5%.[12] in a study conducted in São Paulo, for notification of accidents with biological material in health professionals, 86% involved percutaneous exposure and 82% blood was involved.[15] accidents caused by organic materials are the most evident due to exposure to blood and bodily fluids causing infection such as hepatitis B and C and AIDS virus, and can even be lethal. This contamination occurs more frequent way through the skin, as a result of accidents with sharps.[18]

Accidents involving biological material should be highlighted and percutaneous exposure appeared in 73% of the total analyzed. Then there are the accidents involving mucous membranes (10%), fair skin exposure (10%) and non-intact skin (7%). In 69.49% of accidents biological material had blood in 9.32% had fluid with blood. [17] The main causes of accidents in the nursing team can be directly related to non-observance of regulations, malpractice, inadequate working conditions, instructions incorrect or insufficient, gaps in supervision and guidance, lack or inadequacy in the use of PPE.[14] The act of "recapping needles" was an important predictor of percutaneous injuries in nursing professionals. In addition, a long day working week corroborates in greater chances of occurrence of such accidents and this may be due to a greater worker time exposure to a hazardous situation and/or the fatigue generated by this long journey.[7]

In emergency departments, for example, the risk of accidents increases further due to work overload. The professionals working in these sectors have to perform a number of tasks in a short time and also are associated with the stress caused by nature craft, and this can cause a decrease in concentration and increase the chances of accidents.[12]

The causes of AT may be linked to low wages, which leads to workers having more than one job, and causes attention at work decreases and workers are susceptible to strong physical and emotional pressures.[4] Corroborating the subject, another study points out that the work overload and mental suffering make nursing workers more susceptible to occupational diseases. And these factors accompanied by socio-economic difficulties, since professionals are underpaid, which forces them to adopt double shifts to support, it can be seen how these professionals are subject to high risks of AT.[10]

Nursing workers who make use of sharps are responsible for their disposal in order to meet the NR-32 MTE.[38] Confirming this assumption, another study says that if they had been complied with the provisions of NR-32, possibly many accidents occurred could have been avoided, which would minimize the suffering of the victims.[10] Other studies also follow the same line of reasoning, where workers should make use of PPE and fulfill precisely the NR-32 requirements.[13]

In one study, noted the importance of reactivating the Internal Commission for Accident Prevention (ICAP) in the studied site, it must be expanded in its scope of action and provide spaces for workers, so that they can negotiate improvements in the workplace with the institution for the safety in carrying out their daily activities.[4] in terms of biosafety, engineering services specialized in safety, occupational health and worker health institutions should be more committed to remedy the problems in the workplace, which greatly hurt the workers, and even hurt the hospitals themselves.[10]

The care must be redoubled when handling or disposing sharps, which in addition to promoting the health care of all professionals who share the work space, promotes care for themselves regarding their health and safety.[38] The adoption of hygiene measures hand, proper use of PPE, immunization of professionals, handling and disposal of sharps properly are key measures to minimize the exposure of workers to body fluids and sharps.[40] It is necessary attention when handling sharps and the adoption of safe practices and use of the principles of biosecurity and use of PPE.[38]

The care when handling sharp items is evident. However, the institution is responsible for the applicability of the biosecurity measures in the activities of workers of the nursing staff, through human and material resources, providing PPE, encouraging lifelong learning, and further adoption of health and safety measures in the workplace.[14] There is a poor work organization, especially lack of PPE in adequate quantity and quality and next to this is added the lack of investment in continuous training, thus increasing the risk of accidents.[4] The health of nursing workers is of interest not only of the workers themselves, but of professional associations, trade unions, nursing schools, and above all the service users. Therefore, it is expected that workers seek decent work, guided by the responsibility, scientific expertise and ethics.[16]

CONCLUSION

After the analysis, it could be seen that the AT in health sectors occur mostly with nursing professionals. The nursing team is in constant contact with the patient. In addition, the

low wages that make the professional has to look for other jobs to increase monthly income, the workload generated by the long hours that must be met, poor working conditions especially in hospitals, lack the use of PPE; inattention, indifference, confidence in itself, the lack of measures that should from the service to promote updates courses and providing adequate protection materials in sufficient numbers are factors that make the risk of accidents to gain greater proportion and They may be responsible for the large number of accidents.

Studies always emphasize accidents that occurred more, which most often had the biological material involved, on biosafety, and on legislation that gives action on the AT in health workers. It may be noted that accidents more frequently cited refer to those involved with sharps due to needle recapping, for example, that the most affected parts were superior members and more specifically hands, as they are the part of the body most used in industrial activities.

It is concluded that more was published in the last five years on the AT in the nursing team were the types of TA, possible causes, and biosafety legislation. And you can notice that accidents do not occur only by professional errors, but more than that is linked to the inadequacy of service to preventive measures, work overload, poor conditions of service, low wages that involve increasing the number employment and hours worked with a few hours of rest. If the services gave better conditions and workers had greater awareness the number of accidents would decrease significantly.

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Received on: 24/02/2014
Reviews required: 24/05/2016
Approved on: 15/06/2016
Published on: 01/10/2016

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